

# A New Species of *Cynometra* (Caesalpinaceae) from Kenya

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**Abstract** *Cynometra lukei* is described from the Tana River forests, Kenya. Its nearest relatives are central African species. An illustration and map are provided.

The first collections of this taxon were identified as *Cynometra webberi*, since vegetatively these two resemble each other. The first fruits were collected by Faden in 1977, and it was clear that this taxon was new, since all other Kenyan *Cynometra* species have flattened fruits. It was not until 1988 that flowering material was collected, and so now a proper description can be made.

***Cynometra lukei* Beentje** sp. nov. fructibus indehiscentis racemis axillaribus *C. schlechteri* Harms affinis, a qua foliolorum apicibus obtusis, floribus minoris, staminibus paucioribus fructibusque sulcatis distincta. Typus: Kenya, Lango ya Simba forest, *Luke & Robertson 1267* (Holotypus EA; isotypi K, MO, US, WAG)

Tree 10-15m high, with spreading crown and more or less fluted trunk, sometimes branching near the base; bark smooth, greyish. Young branches puberulous, soon glabrescent, lenticellate, zigzag. Leaves 2-3 jugate; new flush reddish-yellow; stipules quickly caducous, linear-subulate, 4-6mm long, 0.1-0.2mm wide; petiole 2-5mm long, thickened, densely puberulous; leaflets opposite, sessile, obliquely elliptic, elliptic-lanceolate or elliptic-obovate, 0.6-5.5cm long, 0.5-3.4 cm wide, apex obtuse and emarginate, base cuneate on one side, cuneate or obtuse on the other, glabrous except for the emarginate apex where a few minute hairs are usually present. Inflorescence an axillary short dense raceme, with a puberulous axis 3-8mm long, in the young stage covered by overlapping bracts ca. 1.5-3 by 1.7-2.5mm, ciliate; bracteoles 1-1.2 by 0.3-0.6 mm, pubescent on the midrib, very caducous. Sepals 4, reflexed, unequal, elliptic, 2.5-4mm long, 1-2.8 mm wide, hooded at the apex, white with a red base; petals 5 (but often with 1-2 caducous), narrowly obovate, 3.8-4.5 by 0.8-1.2 mm, apex acute; stamens 9 (rarely 10?), the filaments slightly connate at the very base, unequal, 4-9 mm long; anthers 0.5-0.7 mm long, dorsifixed; ovary asymmetric, flattened, 2-2.6 by 1.6-2 by 0.6-1mm, tomentose, with a 0.5-1 mm long stipe; style inserted on one side of the ovary, 3-4mm long; stigma very small. Pods ellipsoid-obovoid, 22-27 by 14-17 mm, deeply grooved on one suture, slightly grooved on the opposite suture, tuberculate, densely and minutely puberulous, 1-seeded. Seed 24mm long, 8mm across.

**Kenya**, Tana River District: near Wenje, in floodplain woodland, alt. 30m, locally common, ster. 8 June 1973, *Marsh 5*. Guru North forest, in riverine forest on heavy soils, flooded, locally common, sometimes in dominant stands, fl. & yfr. 5 Sept. 1988, *Medley 409*; same loc., on

soils with impeded drainage in seasonally flooded back levee, with *Acalypha echinus*, *Lawsonia inermis*, *Maytenus heterophylla*, *Lecaniodiscus*, *Garcinia livingstonei*, *Hyphaene compressa*, fl. 24 July 1988, *Luke & Robertson 1214*. 3 km N of Wema, frequent on deep grey alluvial clay/silt, not close to the river, with *Lannea*, *Garcinia*, *Strychnos*, *Diospyros*, *Phoenix*, *Haplocoelum foliolosum* and many Rubiaceae shrubs, ster. 17 July 1972, *Gillett & Kibuwa 1924*. 1 km E of Wema in dry forest, ster. 29 July 1988, *Luke & Robertson 1253*. Lango ya Simba forest, in forest patch with *Mimusops*, *Garcinia livingstonei*, fr. 20 Feb. 1977, *Faden 77/563*; same loc., fl. & yfr. 8 Aug. 1988, *Luke & Robertson 1267* (type).

Gachathi has also recorded this species at Bura.

**Habitat:** rather dry riverine forest on seasonally flooded soils; alt. 20-50m.

**Local Name:** Mpakata (Pokomo, fide Medley)

The first Kenyan *Cynometra* with indehiscent, ellipsoid, tuberculate pods. This species clearly belongs in groups 1 of Leonard (1951), together with Zairean and Western Central African species; they have in common the scarious bracts, the non-articulated pedicels, the absence of a disk and the partly connate filaments, as well as the fruit characters. The closest resemblance is to *C. schlechteri* Harms from Western Zaire and Gabon, but *C. lukei* differs in the leaflet apex (non-acuminate), the smaller size of bracts, bracteoles and flower parts in general, the lower number of stamens (9, as opposed to 10-12), the grooved fruit and the obtuse fruit apex.

I have named this species after Mr. Quentin Luke, one of the collectors of the type, one of the foremost Kenyan field botanists, and someone with an infallible eye for rare species.

Since this species only occurs in a restricted habitat, which is threatened by altered flood regimes caused by dams upstream, by clearing of forests for irrigation schemes, and by increased use of the forests by a rapidly expanding population, this species can be considered as Vulnerable. The fruits are presumably dispersed by the river, and rot in the mud, thereby releasing the seed.

#### References:

LEONARD J. 1951. Les *Cynometra* et les genres voisins en Afrique tropicale. *Bull. Jard. Bot. Etat* 21:373-446.